

## Claims

- [c1] 1. An HID ballast, powered by a power source, to control operation of a load, the HID ballast comprising:
- a switching section connected to a first bus and a second bus, and configured to output a high frequency voltage signal;
- a bridge converter section having a first leg including first and second series connected bridge diodes, and a second leg including third and fourth series connected bridge diodes, each leg connected to the first bus and the second bus, and configured to receive an input signal from the power source and to convert the input signal into a form usable by the switching section, the bridge converter section integrated with the switching section, to provide the usable signal to the switching section and to contribute to operation of the switching section, wherein the HID ballast is a single stage device.
- [c2] 2. The HID ballast according to claim 1 further including a high frequency level shifting circuit incorporated to receive the high frequency voltage signal and supply a boosted high frequency voltage signal to the load.
- [c3] 3. The HID ballast according to claim 2 wherein the high frequency level shifting circuit is designed to be operational during a startup operation of the load.
- [c4] 4. The HID ballast according to claim 1 further including a canceling device incorporated to selectively cancel the boosted high frequency voltage signal.
- [c5] 5. The HID ballast according to claim 4 wherein the canceling device is designed to be operational following transition from the startup operation.
- [c6] 6. The HID ballast according to claim 2 further including a canceling device incorporated to selectively cancel the boosted high frequency voltage signal.
- [c7] 7. The HID ballast according to claim 6 wherein the canceling device is designed to be operational following transition from the startup operation.
- [c8] 8. The HID ballast according to claim 2 wherein the boosted high frequency voltage signal is approximately 3kv or greater.

- [c9] 9.The HID ballast according to claim 1 further including protection circuitry, wherein the protection circuitry detects at least one of over voltage or over current conditions.
- [c10] 10.The HID ballast according to claim 1 wherein the switching network is a two-switch inverter.
- [c11] 11.The HID ballast according to claim 1 wherein the load is an HID lamp.
- [c12] 12.An HID ballast, powered by a power source, to control operation of an HID lamp, the HID ballast comprising:  
a means for switching to control a supply of power to the HID lamp; and  
a converting means for receiving an input signal from the power source and for converting the signal into a form usable by the switching means, the converter means integrated with the switching means so the converting means contributes to operation of the switching means, wherein the integration of the switching means and the converting means for the HID ballast as a single-stage device.